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ABSTRACT

This working paper, part of a project on the applicability of the French training system in the United States, argues that a systematic national commitment to midcareer worker retraining is necessary for American prosperity and international economic competitiveness. Although findings of the early human capital theorists demonstrated that an educated work force is more productive, the lower financial returns to college education and falling American rates of productivity growth have made more recent theorists question the worth of increased investment in general education. Theorists, however, have focused on education received in a traditional pattern. Much of the potential payoff to worker education is found not in formal education prior to entering the work force but rather in midcareer retraining to cope with technological changes, to prevent skill deterioration, to learn new skills for job promotion, and to facilitate forced job changes. The supply side of the market for retraining services suffers from relatively few bottlenecks; the demand side suffers from these market failures: externalities, cash flow, lack of information, and risk aversion. Current federal policy and programs reserved almost exclusively for special groups do not constitute an adequate public and private response for midcareer worker retraining. The French have developed an extensive institutional arrangement for mobilizing public and private resources for midcareer worker retraining. With certain modifications, such a system should be incorporated into the United States. (YLB)

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RECYCLING AMERICA'S WORKERS: PUBLIC AND PRIVATE APPROACHES TO MIDCAREER RETRAINING

by
Marc Bendick, Jr.
and
Mary Lou Egan*

April 1982

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*This working paper is part of a larger project on the applicability of the French training system to the United States, supported in part by the German Marshall Fund of the United States.

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SUMMARY

This paper argues that a systematic national commitment to midcareer worker retraining is necessary for American prosperity and international economic competitiveness. It shows that current public and private arrangements fail to provide such a commitment and suggests an innovative public-private cooperative system, modeled on the system in France, to meet this need.

It is well established by economic research that investment in worker education is a major source of national economic growth. This paper goes beyond this general finding to argue that the traditional pattern for this investment, which places all education at the beginning of one's worklife, is no longer an appropriate pattern for such investment. The need for adult midcareer retraining arises from technical change, shifts in the demand among occupations, promotional and job changes over a worker's career, and from structural unemployment associated with changes in the composition of jobs in the economy. In the contemporary American economy, investment in worker training must include substantial amounts that are interspersed throughout the worker's lifetime.

The private market for retraining services has several serious failures which prevent the optimal amount of retraining from being produced. The demand side of the market, not the supply side, is the heart of the problem. Employers are reluctant to invest in training workers who may then be recruited away from them by other firms. At the same time, workers are unable or unwilling to invest in their own retraining because of cash flow problems, lack of information concerning retraining options, and uncertainty as to the future payoff of retraining in the job market.

While the federal government has become a major force in the general education and training system in the U.S., it has taken practically no steps in response to the specific problem of inadequate midcareer retraining. As yet there is no coherent national policy which recognizes retraining as a nearly-universal need for all workers in a productive labor force. Rather, there are only ad hoc programs, primarily providing income support, for those who have serious problems in competing in the labor market.

In contrast to the United States, the French have developed an extensive institutional arrangement for mobilizing public and private resources for midcareer worker retraining. Their system addresses the private market failures of financing, risk aversion, and information and reflects a deliberate national commitment to maintain a flexible, well-trained labor force. Decentralized private market decision-making at the firm level and centralized financing requirements imposed at the national level combine to create a market for retraining which simultaneously and flexibly meet employers' needs to acquire skills. With certain modifications, such a system should be adapted to the United States.

RECYCLING AMERICA'S WORKERS: PUBLIC AND PRIVATE APPROACHES TO MIDCAREER RETRAINING

by
Marc Bendick, Jr. and Mary Lou Egan
April 1982

I. Introduction and Overview

> The American job market is changing with a speed that confounds even the experts. Over the next decade, sweeping economic and technological transformations will alter the jobs people do and the ways they do them. Older, heavy industries such as steel and automobile manufacturing will continue a retrenchment that has already begun and the semiskilled legions who served them will be hard pressed to find similar work. Meanwhile, high tech companies will be snapping up qualified workers as fast as schools turn them out. It will be a decade of dramatic demographic, geographic, and educational realignment. And it will be painful.[1]

The subject of this paper is the urgent and growing need for midcareer worker retraining. It examines this need within the framework of the market for retraining services and the theory of investment in human capital. It argues that to insure American economic prosperity and international competitiveness and to facilitate costly and painful transitions, midcareer worker retraining must become as major a focus of investment activity as is investment in physical capital. An innovative public-private cooperative system for ensuring adequate levels of midcareer worker retraining will be suggested to meet the needs identified.

Human capital theorists, writing during early 1960s, introduced the notion of the crucial role a trained workforce plays in the economic growth and prosperity of a nation. "Human capital"—the stock of production potential embodied in a person—is obtained primarily through education and training. In classic studies by Denison and Kendrick, it was shown that a

labor force which had a larger stock of education was more productive. It thus paid to invest in education and training in terms of greater productivity.

In light of America's recent falling rates of productivity growth and lower pecuniary gains to college graduates observed beginning in the early seventies, more recent human capital theorists have brought into question the worth of increased investment in general education. However, both the early and more recent theorists have focused their attention on education received in a traditional pattern: first full-time education, then uninterrupted employment, then retirement. For example, many of the studies which measure financial return on investment in education are concerned with the benefits of an investment in college for males entering college at the age of 18 as opposed to entering the full-time workforce with only a high school diploma. This paper will attempt to reconcile the early and later human capital theorists by arguing that much of the potential payoff to worker education is to be found not in such formal education in the years prior to entering the workforce, but rather in midcareer retraining which is skill-specific and interspersed throughout the worklife of the individual. We will also argue that there is an increasing need for retraining to cope with ever-increasing technological changes, to prevent general deterioration of skills, to learn new skills for job promotion, and to facilitate forced job changes brought about by structural changes in the economy.

We will examine these needs for midcareer worker retraining within the context of the market for retraining services. It will be seen that the supply side of this market—the public and private providers of training

services--suffers from relatively few bottlenecks. There are a wide variety of public and private retraining programs at various prices available just about at any time of the day or night! However, as we know, supply does not drive demand. The absence of market failures on the supply side does not insure that the demand side is similarly efficient. Market failures do exist on the demand side which prevent the optimal amount of retraining services from being consumed. In particular, business firms are reluctant to invest in retraining workers who might leave to join another firm. At the same time, workers themselves may be unwilling to invest in their own retraining because of cash flow problems, limited information on options for their own retraining and risk-averse behavior from the uncertainty they face in the job market even after investing in retraining.

The role of the public sector in many aspects of the American economy has been to correct private market failures. So it should be in this case. However, as we will see, American public sector activity in worker training has been reserved almost exclusively to those special groups in American society deemed most unable to compete in the labor market, such as the disadvantaged. The programs open to dislocated "mainstream" midcareer workers consist primarily of income support made possible by a series of ad hoc legislation passed on an industry-by-industry basis. Virtually no coherent retraining or reemployment services have been developed by the public sector, let alone any based on explicit recognition of the private market failures discussed here.

Other industrialized countries, however, are ahead of the United States in filling the need for midcareer worker retraining in order to maintain a productive workforce. We will examine the French vocational

training system for lessons in how to finance and provide retraining in a private market while encouraging aggregate national goals of economic growth and low unemployment. We will also discuss how the French system could be applied to the United States.

In section II of this paper, we will discuss the findings of the early human capital theorists which demonstrate that an educated workforce is more productive. The next section examines some of the doubts of the later human capital theorists in light of the lower financial returns to college education and falling American rates of productivity growth. An examination of the market for retraining services is presented in section IV. There we discuss the extent of the public and private supply of retraining services. Also, we identify the market failures on the demand side encountered by both individual workers (information, cash-flow and risk aversion) and by their employers (the so-calld free-rider problem). Next, section V describes the French training system and the lessons it carries for the United States. We conclude the paper with a few qualifying remarks on the applicability of the French system to the United States.

II. The First Human Capital Revolution: Discovering that Education is a Wellspring of Economic Growth

In what is referred to as the "human capital revolution in economic thought," economists early in the 1960's began to recognize the crucial role of a trained labor force in generating economic growth and prosperity for a nation. They used the term "human capital" to refer to the stock of economic production potential which an individual embodied, primarily through education and training. They developed theories of the development and use of human capital by analogy to the well-recognized investment by business firms in physical capital.

One of the key implications of this change in thought was that education for the labor force came to be recognized as a priority need for a growing national economy. No longer was attention to "population quality" an after thought, or an equity-motivated allocation of wealth to be postponed until after a country was affluent enough to afford it. Instead, education was seen as a generator and part of that wealth and a prerequisite to be given high priority as a path to economic development. Thus, in both the developing nations of the world and the industrial economies of Europe and North America, the idea of investing in education and training, as well as in physical capital and technology, achieved new currency.

One of the pioneering studies measuring the contribution of human capital to economic development was that of Edward F. Denison. In his classic comparison of the growth rates of nine western European countries and the United States from 1950-62,[2] Denison identified factors (such as investment in physical capital) contributing to economic growth over time and then

interpreted the residual unexplained growth to investment in education. By this method, he estimated that the growth of education contributed 15 percent of the total economic growth in the U.S., five percent in Northwest Europe, and 12 percent to the United Kingdom over this time period. He asserted that the educational stock in Europe was about 50 percent lower than in the U.S. and that this contributed significantly to lower growth rates in Western Europe compared to the U.S.

Denison's methodology was refined and expanded by John Kendrick.[3] Kendrick estimated that over the period 1948-66, 0.6 percentage points of the total factor productivity growth rate of 2.7 percent per year in the United States resulted from new net investment in education. Over the period 1966-67, 0.7 percent of the 1.3 percent average annual productivity growth rate was contributed by education. Education contributes to the quality of the labor force and increases productivity and growth because, as Denison points out, "more education means that a worker performs better, is more receptive to new ideas, makes better choices in the labor market and adjusts more easily to the shifting occupational structure."[4]

Based on such studies, we can say that, in aggregate, human capital investment is an important part of an economy's total investment for economic productiveness. The United States has benefitted greatly, as Denison and Kendrick have pointed out, from its skilled and competent workforce.

Like all macro-economic phenomena involving the economy in aggregate, this relationship between education and economic growth has a microeconomic analogue. That is, an economic process of investing in human capital can be described and studied at the level of the individual worker. While

economists like Denison and Kendrick were investigating aggregate trends, other economists, such as Gary Becker, Jacob Mincer and Theodore Schultz, were looking at the same process for individuals.[5]

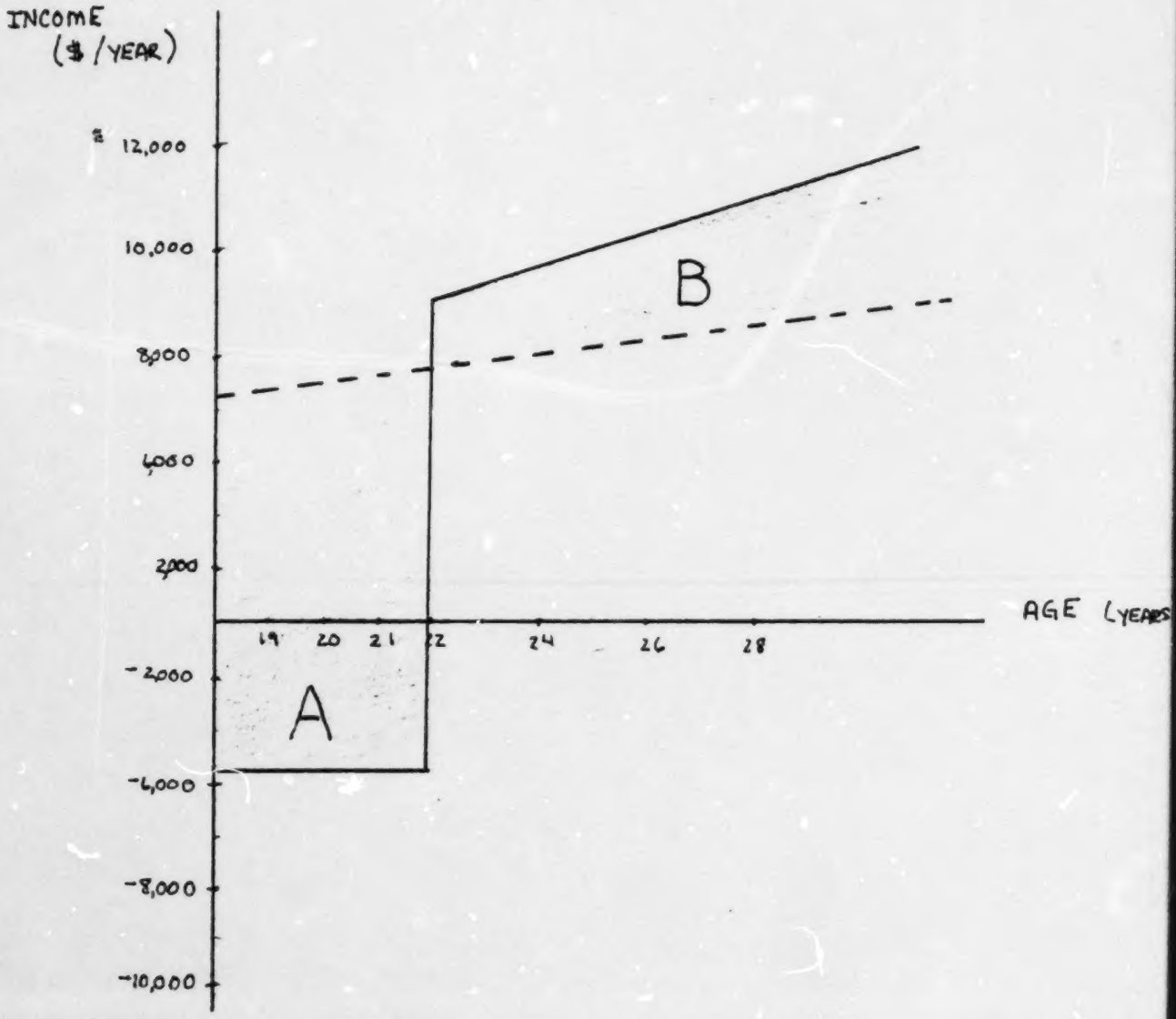
At the individual level, researchers used a model of the human capital investment process depicted in figure 1. This is an "age-earnings profile," which depicts the cash inflow and out-flow involved with investing in additional years of fulltime education. In the example depicted in figure 1, the analyst examines the decision to go to college rather than to work right after high school. The dotted line represents going to work, while the solid line represents attending college for four years and then going to work. Area A in the figure represents the dollar cost of the investment in education (consisting of out-of-pocket tuition costs plus four years of foregone earnings), while Area B represents the return from this investment (higher wages and faster wage growth than that received by a worker with only a high school education). The rates of return to the investment in education can be calculated exactly the same way as one would calculate the returns to a normal business capital investment; that is, one can compute an internal rate of return and then decide whether or not it is "worth it."

Such microeconomic internal rates of return studies confirmed at the individual level what Kendrick and Denison showed at the aggregate nationaleconomic level: education pays. Some typical results of these studies are:[6]

- o For members of the American workforce active in 1949, the return on investment for completing high school and receiving a diploma, rather than dropping out at the end of the eleventh grade, was 13.7 percent; that for completing college rather than dropping out after the third year, was 5.6 percent; and that for

Figure 1

Age-Earnings Profile for Traditional Analysis
of the Returns to College Education



completing eighth grade, rather than dropping out at the end of seventh grade, was 29.2 percent.

- o The rate for return to a high school education rose for an American worker from 16 percent in 1939 to 28 percent in 1958.
- o The rate of return on investment in graduate education for male students receiving Ph.D.s from the University of Nebraska in 1967 averaged 12.6%.
- o For an American Indian worker, the rate of return for an investment in becoming minimally literate was 15.9 percent, while the return from going on from minimal literacy to completing primary schooling was 17.0 percent.

At the same time, of course, nonmonetary rewards such as prestige, professional flexibilty, and pleasant working conditions also accrue to those who have acquired educational credentials.[7]

Thus, by the early 1970's economists were thoroughly convinced of the value of education. So, apparently, was the American public. By 1969, almost half of all white men of college age were enrolled in a college or university and faculty and staff employment in higher education exceeded that in either the steel or automobile industry (a total of 1.67 million workers). Federal financial support for higher education expanded from nearly nothing in 1962 to over $6 billion in 1972.[8] Everyone—from policy-makers and analysts to the proverbial man on the street--believed that an education was the ticket to success.

III. The Second Human Capital Revolution: Discovering the Need to Focus on Retraining

As often happens, just when concensus seemed clearest, doubts began. Faith in the value of postsecondary education was severely shaken by the reality faced by college graduates in the mid-1970's: declining salaries, rising tuition costs, fewer job opportunities, and less exciting career prospects. Labor economist Richard Freeman estimated that the private rate of return of the investment in college dropped between 2.5 and 3.5 percentage points from 1968 to 1973. Correspondingly, the decline in enrollments was so rapid after about 1969 that by the mid-1970's the proportion of males in college was back to the levels of the late 1950's. (In 1969, 44 percent of all 18 to 19 year old civilian males were in college, in 1973, 33.4 percent.)[9] In brief, college graduates in the 1970's fared less well than those in the 1950's and 1960's.[10]

As more and more evidence supported the phenomena being experienced by recent college graduates in the job market, variations of the original human capital theory sprang up to explain the changes. One interpretation of human capital accumulation, the so-called "screening model," asserts that education primarily provides a "signal" to employers of an implicit guarantee of labor quality. Further years of education in this interpretation do not actually increase the student's job skills; they simply serve to differentiate him from other job-seekers. But when everyone starts getting additional years of education—as with the rush into college during the 1960's—then the value of the educational credential as a

screening device evaporates, and the financial return on the investment disappears.[11] Similar to the screening model is one proposed by economist Lester Thurow.[12] He suggests that marginal products are associated with jobs not individuals. More education tells the employer than an individual is more "trainable." Since the labor market is in Thurow's view a market not for job skills but for trainable individuals, more education acts to place one higher in the job queue. But again, education per se does not enhance productivity; it only selects individuals who are already more capable.

Freeman, Rumberger, and others have gone so far as to say that we have "overeducated" our workforce. They cite evidence of lower pecuniary gain, unrealized career expectations (meaning challenging or fulfilling work is not so available to recent college graduates as it once was), and of individuals taking jobs for which they are not making full use of their education.

To add to the growing doubt concerning the basic tenets of the traditional human capital model, the U.S. economy and other highly educated Western European countries are experiencing stagflation and falling rates of national productivity growth. In the U.S. private business sector, for example, the real annual rate of growth of output per hour has gone from an average of 3.98 percent over the period 1948-53 to 2.37 percent over the period 1968-73, and to .64 percent over the period 1974-80.[13] If we specifically look at the manufacturing sector, we can see that real manufacturing output rose in the U.S. in the mid-seventies at about the same rate as in France, Germany, and Japan, but labor productivity grew at only one-third the rate of these three nations.

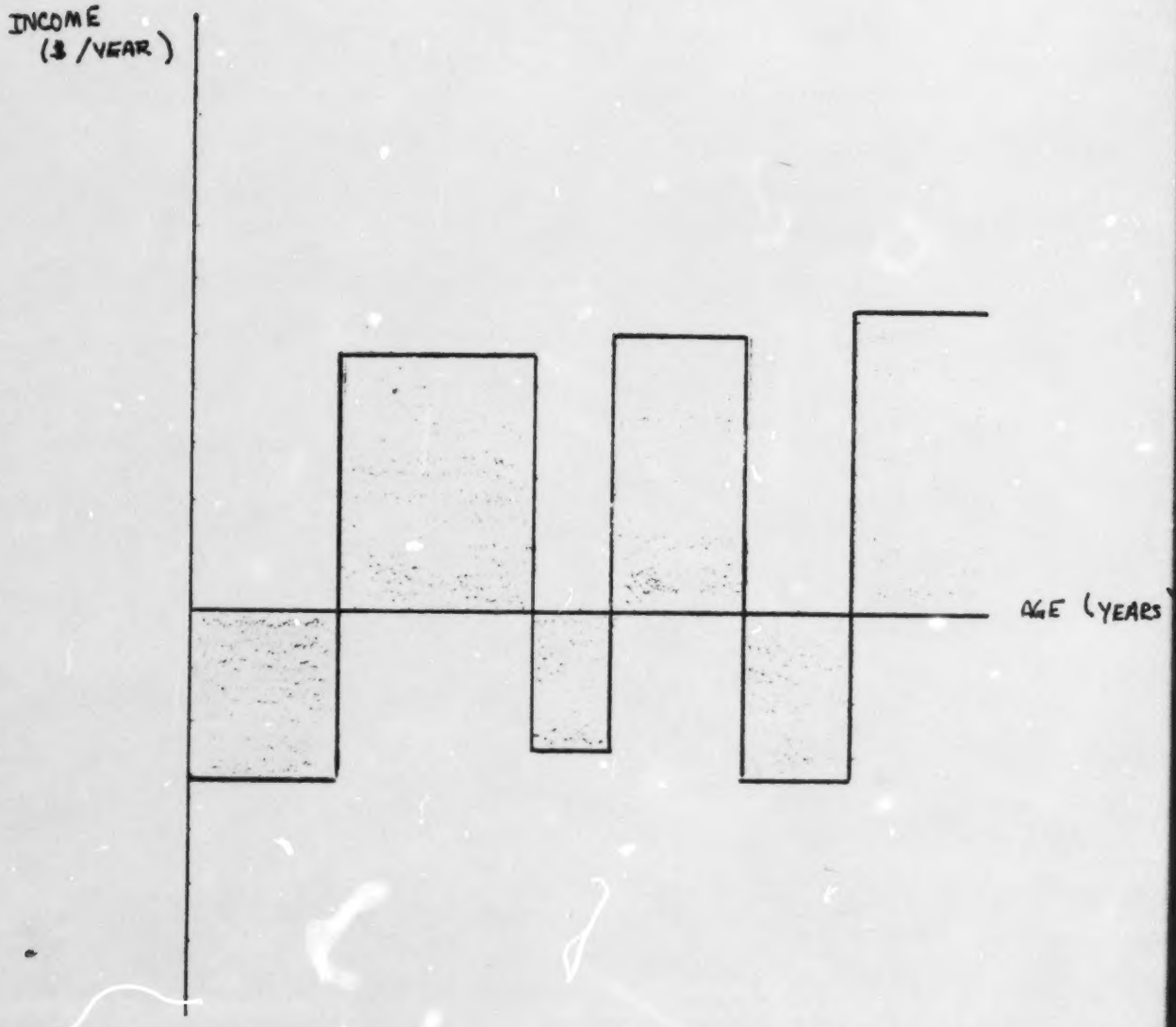
Rapid rates of innovation in production processes and greater physical capital investment are two reasons generally given to explain the superior performance of foreign manufacturing.[14] However, as we have discussed, this is only a piece of the investment package. What sort of human resource policies are needed to insure a high quality labor force, to ensure continuing growth in labor productivity, and to achieve low rates of unemployment and unused capacity? This is the concern of this paper.

Obviously, the unemployment/falling productivity growth malaise reflects many different phenomena in the American and international economy. As we pointed out earlier in the paper when discussing Kendrick's study, total rates of productivity growth may have declined but the contribution education made to the lower (but still positive) total productivity growth did not. How does one reconcile the results of the aggregate studies that show education contributes to productivity with the more recent evidence of declining individual returns to education?

To begin to understand this paradox, it should be recalled that human capital empirical studies are based primarily on the pattern of financial inflows and outflows exemplified in figure 1—that is, with a period of fulltime education followed by a period of uninterrupted work. In this paper, we are interested in targeted skill retraining, which would occur not primarily before the beginning of a career, but throughout the working life of an employee. Such investment would be associated with an age-earnings profile such as that shown in figure 2, rather than the one previously illustrated. Human capital researchers have yet to provide sound empirical studies on the productivity gains likely from this specific type of human capital investment. In fact, one major reason for writing

Figure 2

Age-Earnings Profile Showing Retraining
As a Recurring Career-Long Process



the paper is to try to draw the attention of economic researchers, as well as policymakers, to the subject of midcareer worker retraining which until now has remained the ugly step-sister of human capital investment. We believe it pays, but how much has yet to be empirically determined.

Why is so much schooling necessary and why should it be spread over a lifetime? There are four major reasons why members of the labor force require retraining:

- o to adapt to technological change which demands new skills while staying within one job;
- o to overcome labor supply bottlenecks in rapidly growing ocupations;
- o to develop new skills in order to move voluntarily to a better or different job, or to be promoted; and
- o to acquire new skills to become reemployed after having involuntarily become unemployed because of structural shifts in the economy (dislocation).

The first three reasons for providing retraining may be linked to productivity by the idea of underutilized worker capacity; workers remain employed, but they may not be working as efficiently as possible; or a firm's or industry's expansion plans are limited because of the lack of skilled manpower. The fourth reason for retraining, dislocation, is more serious because it is associated with unemployment, or 100 percent underutilized worker capacity. In those circumstances, not only is a worker's total productivity lost, but public programs such as unemployment insurance are drawn on to support the worker during his period of unemployment. Equally important, there is serious psychological damage which often results from unemployment but is not directly measured in the market place.

In the next pages, we will go into more detail concerning each of these four sources of need for midcareer worker retraining.

Retraining Because of Rapid Technological Change

> Technology consists of a society's pool of knowledge concerning the industrial, agricultural, and medical arts. It is made up of knowledge concerning physical and social phenomena, knowledge regarding the application of basic principles to work in the relevant fields or professions, and knowledge of the rules of thumb of practitioners and craftsmen.[15]

The results of technological change are all around us—better working conditions, new products, and increased productivity. Technological change has traditionally been one of the primary ways of acquire and keep strong market shares, stimulate sluggish industries, and increase labor productivity. While there is concern about the decrease in the rate of patent issuance in the United States, it can be used as one rather simplistic indicator of the country's technological activity. In 1978, 41,233 patents were granted in the United States.[16]

When and if these innovations are transferred to the market and applied in industry, how will the labor force adapt if they are not retrained? In a study done by Eva Mueller, it was found that over a five-year period about 10 percent of the labor force underwent one or more changes in machine technology. (Another 12 percent experienced a machine change as a result of a job change not caused by a change in technology.) She concludes that technological advances changed two to three percent of all jobs annually, a rate which translates to 1.5 to two million workers in the U.S. economy each year.

Occupational obsolescence as a result of technological change is especially common in scientific and professional fields. This pattern is well-illustrated, for example, in one study which examined the content of chemical engineering curriculum in five universities over the period 1935 to 1965. From the courses that were dropped and added over time, one is able to plot information "erosion curves."[18] This study found that chemical engineering students in the class of 1960 was taught only 50 percent of what was taught as "applicable knowledge" to the class of 1970 only one decade later. Equally striking was the study's conclusion about the acceleration of this rate of obsolescence. While it took the chemical engineering class of 1940 twenty years to fall to the 50 percent level of "applicable knowledge," it took the class of 1960 only 10 years to fall that far. Thus, to maintain engineers, scientists and technicians as efficient members of the labor force, high and ever-increasing levels of retraining are required.

Employers' Needs: Labor Supply Bottlenecks Occupations

We have just seen how technological change is constantly occuring within a job. But let us now look at how changes in the demand for certain skills or occupations could cause supply botleneckks, from an employer's point of view, because of changes among types of jobs. Certain occupations have such high growth rates that not all available openings can be filled by new entrants into the labor force. Retraining of workers already at work in other occupations then becomes one alternative way to meet these skill shortages. Otherwise, such labor skill shortages can precipitously push up the cost of labor for the needed skills, as well as act as an inhibiting factor to the expansion of firms and industries.

A recent Bureau of Labor Statistics report identified 73 occupations in which growth rates will be 50 percent or more above the average growth rate of the labor force from 1976 to 1985 (see Table 1).[19] In about half of the 73 occupations, the growth rate is projected to be about twice the average. These occupations cover a wide spectrum of jobs, both blue collar and white collar.

Retraining for Promotional and Career Ladder Requirements

From an employer's point of view, retraining is important to provide a reasonably priced and accessible supply of labor—especially in rapidly growing occupations. Looking at this same phenomenon from an individual worker's viewpoint, retraining can represent opportunities to move into a different occupation or move up the career ladder.

The need for career mobility retraining varies greatly from industry to industry and occupation to occupation. For example, Goldstein[20] uses the contrasting example of hospitals and manufacturing industries to illustrate differences in the structure of the career ladders and the effect it has on training. Hospitals employ pharmacists, doctors, therapists, and other workers who are hired from the outside and given little or no training by the hospital. Workers hired in entry jobs, such as hospital attendants, will not be trained during their career at the hospital to reach professional ranks. In manufacturing industries such as steel and automobiles, in contrast, "tall" promotional ladders are found. A worker is hird as a laborer and works up to semi-skilled and skilled positions. Most jobs are filled by movement up the ranks. In fact, the more skills are firm-specific, the more likely there is going to be internal promotion and training. Thus, the role and timing of retraining over an employee's working life are different within different occupations and industries.

Table 1

A Partial Listing of Rapidly Growing Occupations Over the Period 1976-85 as Forecasted by the Bureau of Labor Statistics*

Bank Officers and Managers
Urban Planners
Police Officers
Teacher Aides
Sewage Plant Operators
Cement Masons
Insulation Workers
Ironworkers and Riggers
Operating Engineers
Plumbers and Pipefitters
Roofers
Geologists
Geophysicists
Surveyors
Airconditioning, Refrigeration, and Heating Mechanics
Business Machine Repairers
Computer Service Technicians
Industrial Machinery Repairers
Dental Assistants and Hygienists
Physicians
Emergency Medical Technicians
Medical and Dental Laboratory Technicians
Medical Record Technicians and Clerks
Radiologic Technologists
Respiratory Therapy Workers
Licensed Practical Nurses
Occupational Therapists and Assistants
Physical Therapists and Assistants
Speech Pathologists and Audiologists
Dispensing Opticians
Health Services Administrators
Homemaker - Home Health Aides
Floral Designers

*"Rapidly growing occupation" is defined as an occupation with a growth rate of demand for the occupation 50 percent or more above the average growth rate (19 percent) over the period, 1976-85.

Source: Adapted from Training and Education by Industry by Harold Goldstein (Washington, D.C.: The National Institute for Work and Learning, 1981) pp. 47-48

Another type of "promotion" or improvement in one's working life is a self-motivated career change. It is estimated that about 25 percent (or 25 million adults) out of the civilian labor force of 107 million are contemplating a career or job change at any time. While this level sounds remarkably high, these findings are supported by data on actual changes. About 30 percent of all workers wind up in different occupations over a five-year period.[21] Aggregate figures illustrate the dramatic shifts in the composition of labor demand on employment. In 1950, about 36 percent of the labor force was classified as "white collar"; and in 1978, the figure was 50 percent. While the percentage of the labor force working in the federal government dropped from four percent in 1947 to three percent in 1977, employment in state and local government increased from seven percent in 1948 to 14 percent in 1978.[22]

We should also not forget that changes in the rules and procedures of the operation of firms and unions have altered the way firms can hire, fire, promote, and treat workers.[23] Most important in this connection, equal opportunity and affirmative action programs have opened areas of employment to some minority groups whose initial career aspirations in the past had been limited by real market barriers in place at that time. Thus, when advancement opportunities have come open to them in midcareer, they have often lacked the traditional preparatory training for the jobs.

In brief, the American labor market is dynamic. Whether for promotional, lateral change, or regulatory reasons, there is a constant call for midcareer adult retraining which cannot be satisfied by education received prior to entry into the labor market.

Retraining for Workers Dislocated by Economic Change

For currently employed workers, retraining services are needed and desired to prevent occupational obsolescence and for promotional and job satisfaction purposes. But for such workers, even if such training needs go unused, the workers' output (though it may be less than 100 percent) is still positive. An unemployed worker is the most costly member of the American labor force. It is one of the great problems of the American economy today that unemployment is high and has been secularly increasing. In 1950, 4.5 percent of the labor force was out of work and looking for work. In 1970, the rate rose to 6.2 percent. In the 80's we are considering the possibility of double-digit unemployment rates. While much of this high rate of unemployment is associated with the business cycle (i.e., if the economy perked up the workers would go back to their previous jobs), a small but significant percentage of the work force is unemployed because of the permanent disappearance of their jobs from structural changes in the economy. This group consists of midcareer or "mainstream" American workers who have previously enjoyed relatively stable work histories, high skill levels, and high wages. We will refer to this group as dislocated workers.

A study done for the National Commission on Employment Policy, estimated the size and characteristic of the dislocated worker population as background information for the policy question of whether or not this segment of the unemployed population should receive special federal help.[24] In this study, 43 industries were defined as experiencing long-term decline (defined as a negative change in employment over 1978-80 period). From those 43 industries, the number of dislocated workers unemployed more than eight weeks as of March 1981 was estimated to be 412,308 (see Table 2).

Table 2

The Number of Workers Unemployed More Than Eight Weeks (as of March 1980) Coming from Declining Industries*

Industry Group	Average Annual Change in Employment 1977-80(%)	Number of Workers Looking for Work More Than 8 Weeks	Number of Workers Looking for Work More than 8 Weeks as a Percentage of of the Industry's Labor Force (%)
Motor Vehicle Manufacturing	-4.7	106,445	10.5
Textile Manufacturing	-1.5	57,744	2.6
Manufacturing (Not elsewhere classified)	-2.2	55,188	3.2
Lumber and Lumber Products	-2.8	45,328	4.1
Steel Production	-1.4	38,547	4.6
Motor Vehicle Sales and Service	-2.5	26,799	1.7
Traditional Retailing	-2.3	24,901	1.1
Food Manufacturing	-2.0	22,877	3.1
Miscellaneous Industries	-2.9	34,479	5.6
Total of 43 industries	-2.6	412,308	3.4

SOURCE: Adapted from "Workers Dislocated By Economic Change: Do They Need Federal Employment and Training Assistance?" by Marc Bendick, Jr. and Judith R. Devine in the Seventh Annual Report: The Federal Interest in Employment and Training (Washington, D.C.: National Commission for Employment Policy, 1981), pp. 185-88.

*A declining industry is defined as an industry which has had a negative change in employment over the 1978-80 period.

Most of the workers came from five industry groups: motor vehicle (106,445 workers), textile manufacturing (57,744 workers), manufacturing not elsewhere classified (55,188 workers), lumber and lumber products (45,328), and steel production (38,547).

This same study estimated the number of workers unemployed for more than eight weeks and associated with declining occupations (149 occupations were defined as declining by the fact of having a negative annual change in in total employment over the 1977-80 period). The number of such dislocated workers was estimated to be 642,006 (see Table 3). Consistent with the results shown in table 2, in which most declining industries were seen to be manufacturing industries, the majority of workers shown in table 3 to be from declining occupations are from manufacturing occupations. They include large numbers of semi-skilled operators (344,754 workers), unskilled laborers (132,907 workers), and skilled craftsmen (184,099). In general, the study characterizes the typical dislocated workers as semi-skilled operatives who formerly worked in traditional manufacturing industries in the "frostbelt" regions of the Northeast and Midwest.

While these data portraying hundreds of thousands of dislocated unemployed workers should not be taken lightly, it is important to place these numbers in perspective. The larger of the two estimates—642,000 dislocated workers from declining occupations—represented slightly under 10 percent of the 6.438 million total unemployed as of the same time period. Furthermore, unemployed dislocated workers averaged only 3.4 percent of the total labor force (employed plus unemployed) within their own industry or occupational group and far less than 1 percent of the total U.S. labor force. At the same time, other empirical findings in the National

Table 3

The Number of Workers by Occupation Who are Unemployed More Than Eight Weeks (as of March 1980) Coming from Declining Occupations*

Occupational Group	Average Annual in Employment 1977-80 (%)	Number of Workers Looking for Work More than 8 Weeks	Number of Workers looking for Work More than 8 Weeks as a Percentage of the Occupational Labor Force (%)
Operatives (machine, vehicle, and tool operatives)	-3.8	344,754	4.8
Laborers	-3.7	132,907	4.7
Craftsmen and Kindred Workers	-3.1	84,099	6.1
Service Workers	-3.8	26,077	1.4
Professional, Technical, Managerial and Sales Workers	-2.9	18,609	1.8
Clerical and Kindred Workers	-3.3	17,559	1.4
Total of 149 Occupations	-3.5	642,006	3.4

SOURCE: Adapted from "Workers Dislocated by Economic Change, Do They Need Federal Employment and Training Assistance?" by Marc Bendick, Jr. and Judith R. Devine in the Seventh Annual Report: The Federal Interest in Employment and Training (Washington, D.C.: National Commission for Employment Policy, 1981), pp. 189-92.

*A declining occupa;tion is defined as an occupation which had a negative annual change in employment over the 1977-80 period.

Commission for Employment Policy study suggest that many of the reemployment difficulties experienced by these unemployed dislocated workers have little to do with mismatches between the skills they have to offer and those the labor market demands. (For example, they may have to do with lack of motivation to seek reemployment, given relatively generous unemployment compensatory payments, or with reluctance to move to a "sunbelt" location to take advantage of plentiful job openings available there.)

The implications of such findings is that some dislocated unemployed workers would be one of the groups who would benefit from a national commitment to midcareer worker retraining. However, neither the number of dislocated workers nor the reasons for their slowness in becoming reemployed suggests the desirability of a special "crash program" of retraining targeted on dislocated workers per se. Rather, their retraining needs should be combined with the other sorts of retraining needs we have discussed in this section.

Summary

In brief, Section II has focused on the continual need throughout a workers life for targeted retraining services. We have given examples of occupational obsolescence, labor supply bottlenecks, career immobility within and among jobs, and unemployment due to structural shifts in the economy as reasons for investing in retraining. In other words, there is a need for a healthy market for retraining services which meets the requirements of employed as well as unemployed workers.

In the next section of this paper, we will therefore examine the health of the market for retraining services. Our goal will be to gage its responsiveness to the needs we have now identified. After identifying some market failures which prevent the optimal amount of retraining services from being consumed, we will then discuss a possible model system which seems to avoid these market failures while maintaining the benefits of a private market. This model system is the French system for vocational training.

IV. The Market for Adult Retraining is Alive, But is it Well?

Up to now, we have seen that there is a body of economic theory and evidence which suggests that retraining is a "good" thing. The real world supports this view, as evidenced by the active market for buying and selling retraining services. In this section, we will examine this market. We will first discuss the supply side of the retraining market, those public and private institutions which actually provide retraining services. (We will see that some institutions, such as government, both demand and supply retraining.) From this description of the supply side of the market, we will conclude that it seems very free of bottlenecks and adjusts relatively rapidly to changes in demand. The demand side of the market, however, suffers from specific market failures, which lead us to the conclusion that a suboptimal level of retraining is currently being consumed. We will discuss each of these market failures--externalities, lack of information, cash flow, and risk aversion--in detail. From this discussion, we will conclude that public intervention into this market is needed and that it should be on the demand side of the market, leaving the supply side alone.

Public and Private Suppliers of Retraining Services

A complete description of all the learning opportunities available for adults is a large undertaking and beyond the subject of this paper. The emphasis in this paper will be on a short description of adult retraining which takes the form of "formal or organized activities (undertaken) with the intention of acquiring new information, knowledge, understanding, or skills related to the roles and routines of a job or work position."[25]

The range of providers and the number of participants in activities falling under this definition are found in Table 4. This table, adapted from one by Byrna S. Fraser, estimates that the number of participants per year ranged from 37.45 million to 73.253 million.

We will now look more closely at the breakdown of retraining opportunities for adults.

Adult Education (Public). Adult education programs are aimed at persons 16 years and older who wish to earn a school diploma, take non-credit occupational courses, or English-as-a-second-language. One can find these courses in most school districts in the country. About 75 percent of the funds to support the program come from state and local revenues, and the rest is from federal funds ($70 million in 1976). About 1.625 million adults took part in this type of adult education in 1976.

Vocational, Trade and Business Schools (Public and Private). The program areas offered to about 1.5 million adults include courses in agribusiness, marketing, health occupations, home economics, office skills trades, and technical skills.[26] It is likely that these schools will expand in the 1980's as fields such as data processing, allied health fields, and office occupations expand. Fraser has estimated that more adults were enrolled in public than private schools of this type. This is probably due more to lower cost per course than differences in the quality of the public versus private schools; the literature generally shows that private schools are of better or equal quality to public schools of the same type.[27]

Table 4

The Structure of Education and Training Opportunity:
Number of Adult[1] Participants by Institutional Providers

Institutional Provider	Number of Participants	Year Data Collected
Elementary or secondary schools	1,626,000	1976
Adult Basic Education	660,000	1975
Vocational, trade, or business schools	1,469,000	1975
Public	814,000	1975
Private	628,000	1975
Two-year college or voc/tech institute	3,020,000	1975
Public	2,790,000	1975
Private	196,000	1975
Four-year college or university	3,257,000	1975
Public	2,358,000	1975
Private	904,000	1975
Private business and industry	5,800,000	1976
Public sector employees, total	3,000,000 to 4,000,000	1978
Government employers[2]	1,367,000	1975
Federal government	556,000	1977
State and local governments	732,000 to 1,464,000	1978
Military employer	1,825,000	1976
Military training	1,250,000	1976
Voluntary education	575,000	1976
Labor organizations/professional assoc.	6,100,000	1977
Union labor education	75,000	1977
Registered apprenticeships	300,000	1976
Unregistered apprenticeships	200,000	1977
Community organizations	7,400,000	1977
Federal employment & training programs[3]	5,310,000	1976
Cooperative extension service	11,000,000 to 14,000,000	1975
Private instruction	1,184,000	1975
Other[4]	1,319,000	1975

[1]Includes persons 17 years of age or older.
[2]Excluding military.
[3]Includes on-the-job training, institutional training, vocational rehabilitation, work experience, and public sector programs.
[4]Includes free universities, city recreation departments, parks and forests programs, etc.

SOURCE: Adapated from The Structure of Adult Learning, Education, and Training Opportunity in the United States by Bryna Shore Fraser (Washington, D.C.: National Institute for Work and Learning), p. 12.

Two-Year Public Community Colleges, Junior Colleges, and Technical Vocational Institutes. This category encompasses four separate types of institutions: (1) junior colleges, which offer vocational career training as well as programs transferable towards a B.A.; (2) branch campuses of state universities; (3) technical institutes which require a high school diploma (or equivalent) for entrance; and (4) vocational centers which do not require a high school diploma for admission. The appeal of these schools for retraining derives from low fees, liberal admission policies, and flexible course schedules. These institutions offered courses in career retraining and skill updating to about 3 million people in 1975.

Four-Year Colleges and Universities. The college population is aging. Between 1969 and 1978, participation by adults in higher education rose at an annual rate of 3.6 percent. Enrollments for students 25 years old and over rose by 44.6 percent from between 1972 and 1976. Colleges and universities are adapting to the change in their clientele by holding classes at night, on weekends, off campus at regional centers, and through different media such as television and the newspaper. Admission requirements are becoming more flexible, as are programs designed specifically for adults which include external degrees, individual learning contracts, and credit for artistic achievement, military service, or volunteer work.[28] The demographic reality of a declining population of traditional college age and the potential unused capacity of colleges and universities are the primary reasons for this flexibility and interest in adult learners.[29]

Private Business and Industry. It is estimated that, after the elementary, secondary and postsecondary educational system, the next largest source of training is private business and industry. Business and industry

supply training services internally and also act as demanders by buying training services and providing tuition subsidies to their employees. To say that little is known in aggregate about the types and amount of training provided, provider motivation, and expenditures for formal and informal training by industry is an understatement. Goldstein and Wirtz claim that "... the short of it is that there is simply no comprehensive or integrated system of work training measurement in the United States."[30]

Industrially-sponsored training is determined by each employer on the basis of his own needs, views on the worth of training, and, in the United States today, without the encouragement of any public "industrial training" authority. The control of retraining is a private affair. A major study of managers' attitudes towards the provision of employeee training ranged from "view(ing) education and training as subsystems of larger systems for assuring the presence of skilled and productive human resources" and that "education and training activities (were) legitimate and necessary business functions" to the attitude that training was a "form of entertainment in industry."[31] In fact, as will be discussed in more detail below, the view of training held by many companies is not to have any, but to employ the "free rider principle" of hiring experienced workers who have been trained by other firms.

This mixed attitude toward retraining is reflected in the lack of attention paid by business to cost records and to evaluations of training programs. In spite of the paucity of studies and often contradictory estimates and findings, retraining is widely believed to improve the quality and efficiency of the work force, upgrade the skills of current employees, increase worker morale, encourage equity, and act as an important fringe benefit for recruitment purposes.

The most quoted study of private industry training was done by Seymour Lusterman for the Conference Board for the period 1974-75. He estimated that about 5.8 million workers participated in training activities in that one-year period. Goldstein best sums up the Lusterman survey and other surveys with the following remarks:[32]

> From the diverse surveys, made at different times and including a range of size classes, a hazy picture emerges: formal training is provided by a good deal less than half of all firms, but by more than 8 out of 10 larger firms (500 employees or more); and the number of workers involved in training in any one year amounts to about one in five in large firms, and a smaller proportion in all industry. Training is mostly given in company sponsored courses during working hours. Training for skill development (as distinct from orientation, the firm's organization, safety, etc.) is only a part of the total. Much of the formal skill training is for management or other white collar skills; manual workers get a disproportionately small share of formal training.

Estimates of expenditure on training in industry vary even more widely than do estimates of participation rates. This is explained partly by the lack of records kept by companies and the difficulty in estimating the indirect costs of training. The estimates range from about $10 billion (including an estimate for indirect costs) to $30 billion and upwards.[33] (The latter estimate is from the American Society for Training and Development.) The median direct cost per year for an employee for both large and small firms is $16, according to Lusterman.

Probably a more interesting breakdown provided by Lusterman's study is between large and small firms. He estimated that about one employee in five is trained in a large firm (10,000 employees or more), with a mean direct cost of $86 per year. Smaller firms in his survey (500-999 employees) train about one in ten employees at a mean direct cost of $27 per year.

To put these expenditures into perspective, Goldstein has estimated that large firms paid less than one percent of their payroll cost for direct training expenditures and probably less than two percent when all the costs of training, including trainees' salaries, are taken into account. In fact, one of the most "gung-ho" advocates of training, the Bell System, spends only about five percent of its total wage and salary bill to support a training system with a 50 percent annual participation rate and an average expenditure of $1,000 per employee.[34]

Labor Organizations. Labor organizations, like businesses, both supply and demand training. According to Department of Labor statistics, there are about 224 national and international trade unions in the United States. About 20 million workers are represented by union bargaining agreements and could seek training through their union. In 1976, the Bureau of Labor Statistics estimated that about 589 of 1570 collective bargaining agreements (covering 1000 workers or more) had provisions for upgrading skills or qualifying workers for different or higher skills.[35] Some agreements also called for advance notification of expected technical changes and retraining of displaced workers.

The relationship between unions and training is a complex one. Behind their support of retraining and apprenticeships, labor organizations are also concerned about the supply of labor and the union's control over this supply. A specific concern is the possibility of an oversupply of trained workers relative to the number of jobs. Unions want job openings with career potential and stability.

In spite of the rhetoric contained in the collective bargaining agreements, only about three percent of the 20 million union members (about 600,000 individuals) are involved annually in training. Besides apprenticeships (of which about 300,000 apprentices are registered with the Department of Labor's Bureau of Apprenticeship and Training), unions provide training in three ways: union education department courses, labor studies programs through universities or colleges, and tuition-aid plans. In the late 1970's, about 75,000 workers took courses offered by the unions in "tool" areas such as shop steward training, contract analysis, and leadership training. These courses were made available by union education departments and were independent of specific schools or institutions. There are two types of programs in labor studies which are connected to institutions. The first is that more and more unions are encouraging and supporting community colleges to develop programs which include skill retraining and upgrading as well as labor studies. The second type is union-run learning centers which offer degrees as well as "tool" courses to their numbers.

Government as an Employer. Of the 19 million employees in the public sector (federal, civilian, state, local and armed services), between three and four million participate in government subsidized training at the cost of about $9-10 billion annually.[36] In the federal government, 86 percent of the training provided was received by the General Schedule (GS) employees (71 percent of the total workforce) and 8.7 percent of the total training provided went to the blue collar federal employees (24 percent of the total workforce).[37] The military accounts for the largest share of training dollars (about $8 billion in 1980, for 226,000 service-years of activity).[38]

Other groups providing adult education. Fraser identifies a variety of other organizations which provide education and training to adults. They include community organizations such as churches, Red Cross, Civic groups, free universities, correspondence instruction, cooperative extension service, and private instruction. Fraser estimates that between 26.2 and 38.4 million adults participate in these programs annually. These opportunities are less relevant to this paper and are pointed out primarily to reinforce the point that adult educational opportunities do not seem to be limited by inflexible supply.

In summary, we have seen that the supply of retraining opportunities is extensive and has adapted to the increasing number of adult-eligible participants. Thus we conclude that bottlenecks on the supply side of the market do not in general seem to be a problem.[39] In other words, there does not seem to be a need for government intervention on the supplier side, as there are no widespread, visible market failures. Despite this general absence of shortages on the supply side of the retraining market, we must also examine the demand side of the market for market failures which might result in less retraining being consumed than is optimal.

Why Do Employers Underinvest in Retraining?

Up to now, we have seen that some employers and human capital theorists have agreed that training increases the quality and productivity of the workforce. Training is a "good idea" and increasingly more important in times of rapid technological change. We also made the point in the previous section that there are a myriad of suppliers, both public and private, who offer adult training services. The supply side of the retraining market does not seem to be hampered by bottlenecks.

No discussion of the market can be complete, however, without examining the demand for retraining services. We will discuss the demand for retraining services from the perspective of both firms and individuals. We will conclude that there are clear market failures on the demand side which reduce the amount of retraining demanded below the socially optimal level. We will begin with a discussion of the "free rider" problem employers face when investing in training an employee. Next, we will discuss why individuals demand less retraining than would at first glance appear rational.

In analyzing employers' decisions concerning employee training, economists start from the premise that firms will decide to invest in worker training on the same basis that they decide on all types of investment: whether the financial returns to the firms from the activity justify the cost. Economists then separate training into two types--"general" training, which raises a worker's productivity in a wide variety of employment circumstances, and "firm-specific" training, which enhances a worker's productivity only while working for that specific firm. When a worker is trained to operate a computer which many firms use in their work, the training is of the former type; when a salesman is briefed on the virtues of his company's products, the training is largely of the latter category.

Because firm-specific training only enhances the employee's productivity within the firm providing the training, competitive firms are unlikely to try to attract the newly-trained employee away from the firm providing the training; the enhanced productivity flowing from the training investment will therefore largely remain with the firm providing the training. But an employee given general training will be an attractive target

for being recruited away from the firm providing the training via higher wage offers to match his increased productivity. Alternatively, in order to keep the employee from being attracted away, the training firm must raise the employee's salary as fast as his productivity rises. In either case, the financial beneficiary of the training investment is the employee, not the employer; and therefore investment in general training is something that employers are extremely reluctant to do.

The implications of this reasoning for workers are made clear if we relabel the concept of "general training" with the more familiar phrase, "transferable skills." In a typical job, there is virtually no financial incentive for an employer to provide workers with skills readily transferable to other employment situations. Should an employee find himself suddenly unemployed due to structural decline of his prior occupation or industry, he will typically also find himself with less-than-optimal development of the skills readily in demand in other occupations or industries. Similarly, he will find that his employer has little incentive to prepare him for promotions or other occupational changes or for adjustment to technological change. The ideal situation for an employer is to be a "free rider," obtaining its trained staff by raiding employees trained by its competitors.

Why are Individuals Reluctant to Invest in their own Retraining?

By the above reasoning, the financial returns to development of transferable skills accrue to workers themselves, in the form of higher wages and decreased probability and duration of unemployment. Workers themselves then logically would be the ones willing to invest in their own general training. And certainly many cases of workers doing precisely that are

readily observable. When a high school graduate goes on to obtain a college degree, he is making such an investment; when a worker takes a job despite a low wage "because it is good experience," he also is making that sort of investment. But a number of circumstances limit the extent to which workers are willing or able to undertake the full amount of such investment which would be socially optimal and economically efficiency.

The first market failure which limits an individuals demand for retraining is the shortage of information. There are at least two types of information which we can define as necessary for an informed decision: the value of the retraining investment to the investor and the feasibility of making the investment. The former type of information will be discussed later in the paper in the section on risk aversion; the latter we shall address now.

For an individual worker to decide whether or not it is feasible to invest in retraining, he must first be aware of the options available to him. Required information includes the types of courses, course schedules, application and approval procedures, plus the possibility of worker-employee subsidized training plans.

In various studies of factors which might act to discourage adult workers from participating in learning programs, lack of information has repeatedly been found to be a barrier. For example, Bostman[40] found that 18 percent of the blue collar workers questioned cited lack of information as a reason for not participating in training. Another study[41] reported that 42.6 percent of unionized workers questioned stated that they lacked information about their negotiated tuition-aid program and 50.7 percent felt that they did not receive enough counseling about course availability or their eligibility for the courses.

Charner contends that while there are many problems that discourage adults from participating in retraining, inadequate information plays a larger role than is often captured in studies:[42]

> Since many educational institutions are rapidly responding to the barriers of scheduling, location, and courses, the critical institutional barriers remaining unattended are lack of information and inadequate counseling.

A second circumstance which interacts with this lack of occupational choice information is that of risk aversion. Economists' studies may indicate that the average worker who undertakes a particular type of training may expect such and such a return on his investment; but there will always be a dispersion around this average experience. Some workers who undertake a training investment in good faith will have difficulty getting placed and will suffer losses on that investment. In circumstances where the worker is unemployed, money will typically be tight in the household; and in the absence of a guaranteed return to this investment—a sure job placement after successful completion of training--many individuals will feel unwilling to take the risk of laying out money for tuition. This unwillingness might be particularly pronounced if the money to pay for training would require borrowing, with fixed future repayment obligations, rather than dipping into past savings.

A final factor which inhibits the willingness of workers to invest in their own retraining is cash flow. This problem is particularly prevalent among currently-unemployed workers; in fact, those who are unemployed have consistently lower participation rates (10.8 percent in 1975) in training than those who are employed (15.4 percent).[43] When a worker is unemployed, unemployment insurance and other wage-replacement programs typically

replace some but by no means all of the worker's normal take-home pay; one recent estimate for 1980 places the average replacement ratio at about 40 percent of pretax earnings.[44] A household's level of expenditures can be adjusted downward only partially and gradually, particularly for established middle-aged households with fixed commitments such as mortgage payments.

Thus, we may conclude that there are definite market failures which might inhibit demand and prevent the optimal amount of retraining to take place. From the firm's point of view, the financial benefits of general retraining goes to the employee, not the employer. Unless all firms invest in general training, some non-investing firms will be able to attract the newly-trained employee away from the firm who had invested in that employee.

It would thus seem reasonable for the individual to invest in his own retraining. Yet we have discussed several circumstances which might limit this source of investment. The first circumstance is the lack of information on the retraining options which are available. Linked to a lack of information is risk aversion, especially when it requires a front-end investment of tuition without a sure job placement. Lastly, we mentioned the problem of cash flow. This is especially important when a household's income drops because of unemployment, at the time when retraining is often needed most.

V. Does Current Federal Policy Meet the Needs?

This section gives us an opportunity to explore briefly federal policies and programs which tried to link human capital development and employment issues with the general productive health of the economy. In the case of current federal programs, we will ask whether or not the market failures discussed in the last section are recognized and corrected by federal intervention.

Throughout this section, two points are brought forward:

- o Federal programs to date have been ad hoc attempts to meet particular economic problems with no attempts to undertake a more systematic commitment to addressing basic failures in the market for worker training; and
- o The relatively small efforts made by the federal government in employment and training have been targeted almost exclusively to those least able to compete in the labor market, such as youth, minorities, and disadvantaged adults. The average "mainstream," midcareer adult worker has not been eligible for federal assistance.

These two facts add up to a resoundingly negative response to the question posed in the title of this section: current federal policy does not constitute an adequate public response to the problems identified so far in this paper.

An Historical Perspective on Federal Involvement in Training

Prior to the 1920's there was very little federal "policy" towards adult education and employment. There were few second thoughts about the effectiveness of the traditional pattern of school, work, and retirement. So long as technical changes were not too fast and the general level of technical skills needed by workers were not very high, industry met its manpower needs from a pool of workers who had a free and general education.

Two exceptions to the federal "no policy" attitude were the Morrill Act of 1862 and The Smith-Hughs Act of 1917. The Morrill Act set aside public land for state universities which would teach agricultural and mechanical arts. These A and M schools would also meet the agricultural industry's needs for ongoing training and technological advancement through extension services and experimental stations. The Smith-Hughs Act was aimed at the provision of secondary school vocational education within the setting of a comprehensive secondary school environment.

For the most part, however, occupation-specific skills were provided through apprenticeships or from workers hired from other companies. Adult education outside of work was informal and provided by public libraries, literacy classes for immigrants, Chautauqua-like societies, or debating groups, and relatively little of it was specifically vocational.

The depression was a period of great income loss and underutilization of human capital. It was not until 1941 that 1929 levels of employment were again reached. During this interval, formal training programs within industry, apprenticeships, and training through job experience were reduced. Programs such as New Deal job creation, unemployment insurance, and social security were aimed at income replacement for the unemployed, but not primarily training. It was not until after World War II that a massive adult retraining program was initiated under federal sponshorship. The G.I. ill of Rights, or Servicemen's Readjustment Act of 1944, paid for 7.5 million veterans to attend university, pre-college, and on-the-job training. By 1956, about one-half of all World War II veterans had used the G.I. Bill, at a total cost of about $13 billion.

At nearly the same time as the G.I. Bill, the Employment Act of 1946 marked the beginning of an era which recognized that there was a link between labor market problems, such as structural unemployment, and reduced economic performance. This Act was a normative mandate which recognized the "continuing responsibility of the Federal government to use all practicable means . . . to promote maximum employment production and purchasing power." In the Economic Report of the President (Jan. 1950, p. 117), President Truman called for determined efforts towards "more vigorous retraining, lending, and capital development" in order to reduce structural unemployment.

Structural unemployment, unlike temporary unemployment (often called search, frictional, or cyclical unemployment), occurs because of changes in production techniques or shifts in product demand. Those workers who are displaced because of these changes and cannot find other employment because they lack suitable skills or geographic mobility are defined as structurally unemployed. During the late 1950's and early 1960's a debate between the Structuralists verus the Aggregate Demanders raged over how best to redress structural imbalances and unemployment. What was probably most instructive about the debate was that it provided[45]

> widespread recognition that adequately equipping workers with the skills to cope with economic change is as important for national economic growth and well-being as it is for displaced workers. Worker retraining policy has both a systems and an individual aspect, in which both public and private interests have a stake.

What really put teeth into this debate was the 1958-59 recession's sluggish recovery and the "high" unemployment rate for married men (five percent) and a high general unemployment rate of seven percent. The Man-

power Development Training Act of 1962 (MDTA) and its predecessor, the Area Redevelopment Act of 1961, were born out of the fear in this era of technological displacement and a belief that training was the way to fill the large number of existing job vacancies. For a very brief period, about 1962 through 1966, MDTA targeted part of its program on "heads of families displaced from jobs by technological and economic change."[46]

However, as the economy and unemployment improved, and President Johnson's War on Poverty began in 1965, MDTA training became more and more focused on specific groups in the population with special labor market handicaps, rather than on workers who were victims of technological or structural economic change. By 1966, 65 percent of MDTA training positions had to be filled by the disadvantaged. The Economic Opportunity Act of 1964 (which created the Office of Economic Opportunity) and amendments to MDTA confirmed the shift in emphasis. As OEO and Department of Labor programs became intertwined, reform movements to decentralize and decategorize MDTA began. In 1973, MDTA was absorbed into the Comprehensive Employment and Training Act (CETA) which (except for a tiny nod in Title II B and C in the direction of the long-term unemployed) is totally for disadvantaged workers.

The Current Federal Response to the Employment Problems of Non-Disadvantaged Workers

> Because of its limited size and purpose the [federal] employment and training system is not a panacea for all of the current and prospective problems of the labor market. It can, however, be a useful adjunct to other policies by encouraging the development of human resources, providing equal opportunity to attain economic self-sufficiency and minimizing the costs of adjustment.[47]

In 1980, there were about 118 million people in the American labor force. About 21 million experienced some unemployment at some time during that year. The federal outlay by all agencies for employment and training programs in FY80 was about $14 billion If we turn to an "average training dollar" (see Table 5) only seven cents of the dollar was spent by the federal government for employment and training. (This does not include civilian and military training supplied to federal employees.)

Let us next examine where that seven cents goes and how much of it is available for mainstream adult retraining needs. There are five major categories of services provided in federal training programs.[48]

- o On the job training which reimburses employees for the costs of hiring disadvantaged persons for private sector job openings
- o Institutional (classroom) training in vocational and job related remedial education
- o Work experience in the form of subsidized employment to people with little or no work history
- o Vocational rehabilitation for those with physical and mental handicaps to employment
- o Public service employment which supplies transitional jobs in the public sector for those who need to acquire work habits and skills to compete for regular jobs.

These services are offered in various programs administered by the Department of Labor, such as the Comprehensive Employment and Training Act (CETA), the Work Incentive program (WIN), and the Senior Community Service Employment Program. Though no other federal training program is as large as CETA ($9 billion in FY80), other agencies administer employment and training services such as: the Job Opportunities Program (Department of Commerce), training for American Indians (Department of the Interior),

Table 5
Federal Employment and Training Programs
As a Proportion of an Average Training Dollar*

Institution	Proportion of Average Training Dollar
Elementary, secondary and post-secondary educational institutions	$ .73
Private business and industry	.15
Government (civilian and military)	.05
Federal employment and training programs - CETA	.04
Federal employment and training programs - non-CETA	.03
TOTAL	$ 1.00

SOURCE: Adapted from Seventh Annual Report: The Federal Interest in Employment and Training (Washington, D.C.: National Commission for Employment Policy, 1981), p. 83.

veteran services (Veterans Administration), and prison inmate services (Department of Justice). The services are clearly aimed at those groups least able to compete in the labor market, not the mainstream, midcareer worker, either employed or unemployed.

Mainstream, midcareer workers in the United States are eligible for some forms of government labor market assistance, of course; however, these are not retraining services. Anyone legally qualified to work in the U.S. is eligible for job search assistance in the form of career counseling, job banks, job matching systems, and guidebooks which are provided by the U.S. Employment Service or Job Service (JS). This is a federally-funded, state-administered system with about 2,600 local offices and 43 Apprenticeship Information Centers. The federal government also has funded programs aimed at helping people make informed choices when planning their career. The objectives of the National Occupational Information Coordinating Committee (NOICC), and its corresponding state committees, are to improve occupational and career information at all levels of government. They often fund prototype programs at the state and local level, such as the Career Information Systems (CIS).

Unemployment Insurance (UI) is probably the best known program available to midcareer unemployed workers. In FY1980, about $14 billion in regular benefits (usually payable up to 26 weeks in most states) and about $1 billion in extended benefits (an additional 13 weeks) was paid to more than 10 million people.[49] The Omnibus Reconciliation Act of 1981 has made changes to the UI system which include eliminating the national trigger for extended benefits, requiring claimants to have worked at least 20 weeks (or have an equivalent amount of wages) during the base period in order to

receive extended benefits, and requiring the states to pay interest on federal funds advanced to state UI accounts.[50]

If an unemployed worker has been adversely affected by increased imports of articles similar to those produced by his employer's firm, then he may be eligible for additional assistance, supplementing those services just described. Trade Adjustment Assistance (TAA) benefits are provided under the Trade Act of 1974. These benefits include compensation, training, and employment services such as grants for job search and relocation activities. From the start of the trade readjustment program in April 1975 through FY80, about one million people received unemployment benefits totaling $2.4 billion. About 536,000 of these recipients entered the program in FY80. As for the other benefits offered by TAA, from the beginning of the program in April 1975 to September 1980, 363,016 eligible workers filed applications for employment services, 28,018 entered training, and of these, 12,760 completed the training.[51]

A similar worker adjustment program, established in 1968, to aid lumber and mill workers displaced by the expansion of the Redwood National Park, has already paid $32 million to workers and is expected to pay another $38 million by the end of the Redwood Park Act in September 1984. Other "ad hoc" legislation has been passed or proposed in recent years as more and more industries and their workers face the problem of adjusting to reduced demand. This legislation includes the Airline Deregulation Act, the Public Works and Economic Development Act, the Regional Rail Reorganization Act, and the Urban Mass Transportation Act. As is pointed out in the National Commission for Employment Policy's Seventh Annual Report, the current Congress and the Administration have not yet decided whether dis-

located, mainstream workers should have access to federal programs now targeted specifically at non-mainstream groups or whether they should continue to provide temporary income support through ad hoc legislation and unemployment insurance.

Under this section, it has become clear that unless one is part of a "special needs" group, there are few federal employment and training programs for which a mainstream worker is eligible, and even among those programs, training is only a minor effort. We have also argued earlier that the dislocated unemployed mainstream worker was too small a proportion of the workforce and relatively too "well-off" to be categorized as a special need group, in spite of the ad hoc legislation springing up in their favor. On the other hand, do we ignore the needs of this group because they are not obviously disadvantaged? No. We are arguing that the current federal programs have yet to address adequately the retraining needs of dislocated unemployed mainstream group, as well as preventive and career-advancement retraining needs of the employed labor force. Specifically, we argue that it has failed to reduce the private market failures for retraining services which adversely affect these groups, as well as the disadvantaged. In the next section we will examine a system which attempts to meet this entire spectrum of midcareer training needs.

The French system is a coherent plan which is preventive rather than reactive when attempting to maintain a qualified labor force and reduce the most costly of labor market failures—unemployment.

VI. Can the French Teach Us a Lesson?

The French Training System: A Description[52]

As with most social legislation, the French system of adult vocational training has developed over a period of years. The current system can be traced to a number of legal texts (1959-68), policy guidelines (1968-70), and finally a law in 1971. There were several objectives behind what ultimately became Law 71-575 of July 16, 1971, or "The Organization of Further Vocational Training in the Framework of Permanent Education." This law first of all articulated the workers' right to training and retraining throughout their worklife ("formation professionnele continue"). The law's objective included "helping employees adapt to changes in technology, promote their social advancement by providing them with access to different levels of education and occupational qualifications, and enable them to contribute towards cultural economic and social development."[53]

Although France has a free public elementary and secondary education system, it is a system which is heavily weighted towards failure and early school-leaving. A Commission on the Future of Training in July 1975 found that 16 percent of any age group still did not complete primary education and that only 25 percent of all men drafted into the army in 1975 had completed secondary school with the baccalaureat. (This examination must be passed before one may enter a university.) Thus the educational system has resulted in a high level of dropouts at all levels. The law of 1971 was aimed at giving workers a second chance.[54] In light of the Sixth Plan's (1971-75) goal of social progress through industrialization, it was felt that the French workforce was underqualified to compete internationally. The law of 1971 thus addressed both social and economic objectives.

The law states that the State, local authorities, public institutions, public and private educational establishments, associations, trade organizations, trade unions, family associations, and firms shall collaborate to provide training. Thus, the system is decentralized and flexible to say the least. There are national agreements between employers' organizations and trade unions; workers and managers provide information to authorities on training needs as well as administer some of the training and financing establishments. In firms of over 50 employees, works councils (representatives of management and staff) are informed of training plans. These mandatory councils are advising bodies. If an annual report of their discussion of the training plan is not provided by the employer to the appropriate authority, the employer must pay the National Treasury a fine of 0.5 percent of his total wage expenditure.

The importance of the law of 1971 was that it created a market for training which encouraged firms to develop their own training policies and flexible financing methods while requiring a minimum compulsory level of expenditure for training from all firms which employed 10 or more people. In 1972 the contribution was 0.8 percent (about one percent in 1977) of the firms total expenditure on wages. For training expenditures to be deducted from the compulsory percentage of the wage bill due to the State, four types of training could be provided:

- o Preventive training to reduce the risk of redundancy from technological change;
- o Adaption training for those looking for new jobs;
- o Training for occupational advancement through higher qualifications; and

o Refresher training for the maintenance of skills.

Firms can be either suppliers of training themselves or buy outside training services on an annual or multi-year (up to 3 years) basis. Alternatively, firms or industries can also fulfill their training obligation by making a financial contribution to a Training Insurance Fund (FAF). These funds are established by agreements among employers organizations, employers or trade unions. This latter approach has chiefly been utilized by small and medium-sized firms in well-organized trades or industries. The Funds, which may cover one industry or several, bear the cost of training courses and wages and also have the task of informing workers of the courses that are available and their right to training. In 1975, there were 88 funds which covered 45,000 firms and 2.32 million employees. The funds accounted for only about six percent of the total training obligation. To check that training is occurring, supporting documents are required so that the expenditures can be checked. These documents might be in the form of training agreements or proof of membership in a Training Insurance Fund.

A third way a firm might meet part of its obligation is to contribute up to 10 percent of its total obligation to an approved organization for training studies, development of teaching methods, or other training-related activities. Lastly, a firm might finance training programs for the unemployed seeking employment in training centers. If the firm does not follow one of these methods of financing to provide training, it pays the National Treasury the required amount.

As we mentioned earlier, the law is designed to cover all members of the work force: wage earners, non-wage earners, and unemployed. The largest group comprises those who are employed. In 1975, firms financed training for 1.79 million employees or about 17.8 percent of the workers. About 56 percent of the courses were given by the firm, while the rest were purchased outside the firm. Two-thirds of these courses were refresher or further training courses. Not unlike similar participation data in the U.S., skilled and white collar workers accounted for about 46 percent of the trainees, foremen and technicians 23 percent, unskilled 16 percent, and engineers and staff 15 percent.

A second major category of potential trainees is the unemployed wage earners. The unemployed worker has access to his former wages and training paid for by the State. The State assumes responsibility for retraining courses which are granted priority status by the government: such as those for unemployed, disadvantaged, migrant, handicapped, or youth. In 1976, about 135,000 trainees took part in training, which averaged about five months. Other training-job placement programs are also provided through the National Employment Agency (ANPE). The State funds certain training establishments, pays trainers wages, funds studies, and also funds some of the buildings and equipment at the training centers.

A part of the second category of unemployed wage earners are what we have described earlier in this paper as "dislocated" workers. In France this includes workers who have lost their jobs because economically induced reorganization of the firm, merger, or cessation of activities. The dislocated workers may attend retraining courses financed by the State, organized by the chambers of commerce, trade, or agriculture, at a public

establishment or one which has concluded an agreement with the State, or a course approved by the joint committee on employment. If one chooses to attend a training course, the unemployment insurance system pays one's wages for up to one year. Any out-of-pocket education costs are borne by the trainee. This is not an oustanding expense, however, given the range of publically supported institutions. In 1975, about 8,000 people benefitted from this training scheme.

One feature which makes the French system more than just a vocational training system is the legal right to special leave from work for training. It is considered a milestone in the construction of an adult education system, as it allows for periods of employment and periods of training to be combined over the period of a worker's life. The duration of training may not exceed one year, and the employee is not necessarily paid his wages by his employer. In 1975, only about 65,000 employees exercised this right. This was probably because of de facto rather than de jure limitations and because the provisions for the trainees' right to wages or the assumptions of education costs were not clear.

In summary, we can say that the French Vocational System has the following features:

- o The concept of vocational training refers to all types of training connected with working life and is designed for persons who have finished their initial training.
- o Firms must annually earmark at least 1 percent of their total expenditure on wages for training. Thus, a sustained level of demand is created for training services.
- o A flexible, free market for training services exists where firms and individuals decide which courses are to be provided.

- o A variety of financing mechanisms are available, such as the Training Insurance Fund (FAF).
- o The State draws up vocational guidance policy in conjunction with industry and assumes direct responsibility for training courses granted priority by the government.

We can see that the law of 1971 created a sustained level of demand for training while allowing the free market to operate. As in the U.S., the adult retraining network of suppliers already existed. In France, however, the law of 1971 was able to introduce some control of the training network such as registration for all private bodies organizing training courses and the submission of an annual report on the use of the funds from employers. France has also been able to integrate and to subsidize training for certain segments of the population who are not currently employed but are part of the potential labor force. Through its flexible financing options and compulsory contributions it has overcome firms' free rider reluctance to provide retraining and at the same time addressed the issues faced by the individual such as information, risk aversion, and cash-flow.

Lessons for the United States

A major lesson the U.S. can learn from the French system is that much can be gained from setting a compulsory retraining minimum. This amount sets a minimum expenditure for all firms and mitigates the free rider reason for firms not to provide retraining. The various financing options, especially the fund (FAF), which encourages smaller firms to reap economies of scale larger firms have enjoyed, does not inhibit a firm from making its own decision on the type of retraining it needs.

The compulsory minimum also forces a firm to do a certain amount of forward planning for its human capital needs. A firm's management is required to discuss its plan with its works council which helps the information flow as to what retraining is forthcoming.

Cash flow problems are also reduced in the French approach to retraining. The firm's courses are pre-paid either by a government subsidy or by the firm's compulsory minimum payment. If an employee takes special leave for retraining, he does not lose his employee benefits such as seniority and paid leave. If one loses one's job because of economic reasons, one year of salary is available while investing in retraining. This lessens the financial hardship of retraining considerably.

Another feature of the French system, information flow, can help reduce individual risk aversion. One of the objectives of the FAF is to ensure the flow of training information to the members of the industry. National planning also identifies priority work force needs and subsidizes certain job retraining activities, thus indirectly guiding some workers into career areas with a high potential for employment. As has been pointed out, much of the training plan is initiated from the employers' perspective with advice from the works council. Thus, some demand for retraining will occur because of the possibility of future shortages in certain skill areas.

Finally, the U.S. could learn much from France's approach to the special needs of various groups in the labor force and the constant need for retraining in order to maintain a highly qualified labor force. They have devised a coherent and comprehensive system which is based on the private market and the acknowledgement that certain issues of employment and training are best met head on.

Is the French System Too French for the Good Ol' U.S. of A.?

One cannot assume that a program designed by one country can be transferred whole cloth to another. While the French system works well in France, might it work equally as well in the U.S.? We believe that there are several differences between the U.S. and France which would cause some hesitation in the application of the French system.

First, French citizens and industries have experienced national economic planning since the 18th century. Institutions such as works councils, employers organizations, and Chambers of Commerce and Industry have been accepted as "voices" for various groups in the modern indicative planning process. Whether or not U.S. citizens and firms would be comfortable with similar decision-making bodies and more planning is open for question.

Second, French retraining is based on a payroll tax. There is doubt whether or not American employers would readily agree to another tax. However, whether the money comes from a payroll tax, a reduced Unemployment Insurance contribution, or the redirection of secondary school vocational education funds, this is probably the most easily solved question in the entire process!

Third, the French government devotes about 25 percent of its total budget to education and training. They have established, by law, the right to retraining. It is questionable whether the U.S. government would be able to break with its tradition of ad hoc program initiatives and tackle the issue in a comprehensive manner.

Thus, while the French system is not a perfect match, it does provide a model which would solve many of the market failures common to the U.S. market for retraining services.

FOOTNOTES

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39. For a study reaching this same conclusion in a specific industry, see Mary Lou Egan and Marc Bendick, Jr. "Management Training for Public Welfare Agencies: Why the Need Remains Unmet," Administration in Social Work, Vol. 1(4), Winter 1977, pp. 359-367.

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43. Charner (1980), p. 34.

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51. Johnston, p. 90.

52. This section is a summary of the report, Vocational Training - Supplement France by Bernard Pasquier of the Centre Pour le Developpement de L'Information sur la Formation Permanente (INFFO) (Brussels: Commission of the European Communities, 1977), pp. 1-49.

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54. In 1977, the policy changed to concentrate on workers who had not received a "first chance." This policy focused on retraining persons seeking first time employment, training for youth to assist them in the school-to-work transition, programs which stressed social advancement, and programs aimed at improving the working conditions and position of manual workers. Thus, the target groups were essentially those served by American Federal programs for the disadvantaged.